

REMARKS

This application is believed to be in condition for allowance because the claims, as amended, are believed to be non-obvious and patentable over the cited references. The following paragraphs provide the justification for this belief. In view of the following discussion, the applicants hereby respectfully request further examination and reconsideration of the subject patent application.

1.0 Claim Objections under 37 CFR §1.75:

As noted by the Office Action, claim 7 includes language identical to dependent claim 4. Applicants appreciate the identification of this inadvertent error and have cancelled claim 7 in response to the objection under 37 CFR §1.75.

2.0 Rejections under 35 U.S.C. §103(a):

In the Office Action of April 3, 2007, the following rejections were advanced under 35 U.S.C. §103(a):

- Claims 1-8, 10-12, 14-17, 22, 23-31, 37-43, 45, 46, and 48 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** (US 6,574,594) in view of **Ellis** (US 5,504,518);
- Claims 13, 19, 21, 32, 35, 44 and 49 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis** and further in view of **Eubanks** (US 6,704,553);
- Claims 9, 33 and 34 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis** and further in view of **Olerund** (US 2,776,429);

- Claims 20 and 47 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis** and further in view of **Burges** ("Extracting Noise-Robust Features from Audio Data" IEEE ICASSP 2002);
- Claim 36 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis** further in view of **Eubanks** and further in view of **Olerund**;
- Claims 50-56, 58-61, and 63-65 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis** and further in view of **Eubanks**;
- Claim 66 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis** further in view of **Eubanks** and further in view of **Burges**; and
- Claim 57 and 62 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis**, further in view of **Eubanks** and further in view of **IEEE** (IEEE 100 The Authoritative Dictionary of IEEE Standards Terms" IEEE 2000).

In order to deem the Applicant's claimed invention unpatentable under 35 U.S.C. §103(a), a prima facie showing of obviousness must be made. However, as fully explained by the M.P.E.P. Section 706.02(j), to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a **reasonable expectation of success**. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations**.

Further, in order to make a prima facie showing of obviousness under 35 U.S.C. 103(a), all of the claimed elements of an Applicant's invention must be considered, especially when they are missing from the prior art. If a claimed element is not taught in the prior art and has advantages not appreciated by the prior art, then no prima facie case of obviousness exists. The Federal Circuit court has stated that it was error not to distinguish claims over a combination of prior art references where a material limitation in the claimed system and its purpose was not taught therein (*In Re Fine*, 837 F.2d 107, 5 USPQ2d 1596 (Fed. Cir. 1988)).

2.1 Rejection of Claims 1-8, 10-12, 14-17, and 22:

The Office Action rejected claims 1-8, 10-12, 14-17, and 22 under 35 U.S.C. §103(a) based on the rationale that the proposed **Pitman-Ellis** combination reference discloses the Applicants claimed invention. Claim 1 has been amended to overcome this rejection by partially incorporating subject matter of dependent claim 19 into independent claim 1.

With respect to claim 19, the Office Action suggests that the **Eubanks** reference discloses the elements of claim 19 in view of the proposed **Pitman-Ellis** combination reference. In particular, in rejecting claim 19, the Office Action states that:

"Eubanks discloses a system that suspends sampling and playback of a signal for a period of time when an object embedded in the signal is identified (column 4 lines 5-20, the system determines if the template created by the signal matches a stored set of templates. If it does, the system sends a control signal to the tuner, which tunes to a new frequency)."

However, in col. 1, lines 57-65, **Eubanks** explains the following:

"In one aspect, the sound system allows the listener to specify a set of "disliked" content and a set of "liked" content. The sound system compares

what the current radio station is broadcasting to the set of "disliked" content, and if there is a match automatically changes the station. Similarly, the sound system compares the set of "liked" content to that which a predetermined radio station is broadcasting, and if there is a match automatically tunes to the predetermined radio station."

In other words, **Eubanks** simply changes the radio station if a currently playing song is disliked by the user. Similarly, **Eubanks** will change the radio station to another station if a particular song that the user likes is playing on that other station. Clearly, **Eubanks** provides no mechanism for temporarily suspending sampling of a particular radio station for some period of time. In fact, once **Eubanks** changes the station, there is no guarantee that **Eubanks** will return to that station after any particular period of time since the channel changes provided by **Eubanks** are based entirely on whether a user likes or dislikes particular content being played on a station.

Therefore, in stark contrast to the position advanced by the Office Action, it should be clear that the **Eubanks** reference fails completely to disclose ***"suspending sampling for a period of time of a particular one of the input signals whenever an object embedded in that input signal is identified in that signal as a known signal object."***

Consequently, with respect to claim 1, as amended, no prima facie case of obviousness has been established in accordance with both the M.P.E.P. Section 706.02(j), and in accordance with the holdings of *In Re Fine*. This lack of a prima facie showing of obviousness means that the rejected claims are patentable under 35 U.S.C. §103(a). Therefore, the Applicants respectfully request reconsideration of the rejection of claim 1, as amended, and thus of dependent claims 2-8, 10-12, 14-17, and 22 under 35 U.S.C. §103(a) over the proposed **Pitman-Ellis** combination reference in view of the novel language of claim 1, as recited below:

"A computer-implemented process for providing an interactive user interface to a database of information describing contents of an input signal, comprising:

extracting at least one fingerprint from each of at least one sample of at least one input signal;

comparing the extracted fingerprints to known fingerprints in a database of fingerprints of known signal objects to locate matching fingerprints for identifying one or more objects embedded in the at least one input signal as a known signal object;

suspending sampling for a period of time of a particular one of the input signals whenever an object embedded in that input signal is identified in that signal as a known signal object;

storing one or more extracted fingerprints that do not match any fingerprints in the database of fingerprints to the database of fingerprints as an unknown object fingerprint for use in matching subsequent instances of repeating objects in the at least one input signal;

in an object database, storing statistical information derived from the at least one input signal for each sample having an extracted fingerprint that matches a known fingerprint; and

providing an interactive user interface for querying the statistical information in the object database." (emphasis added)

2.2 Rejection of Claims 23-31, 37-43, 45, 46, and 48:

The Office Action rejected claims 23-31, 37-43, 45, 46, and 48 under 35 U.S.C. §103(a) based on the rationale that the proposed ***Pitman-Ellis*** combination reference discloses the Applicants claimed invention. Claim 23 has been amended to overcome this rejection by partially incorporating subject matter similar to that of dependent claim 35 into independent claim 23.

With respect to claim 23, the Office Action suggests that the **Eubanks** reference discloses the elements of claim 23 in view of the proposed **Pitman-Ellis** combination reference. In particular, as with claim 19, in rejecting claim 23, the Office Action states that:

"Eubanks discloses a system that switched between radio broadcasts at predetermined time intervals as well as intervals that are defined by what has been identified (column 5 lines 21-31, the system outputs audio content until it receives a signal from the user indicating a like or a dislike and column 4 lines 5-20, the system determines if the template created by the signal matches a stored set of templates. If it does, the system sends a control signal to the tuner, which tunes to a new frequency)."

However, as discussed above with respect to the rejection of claim 1, **Eubanks** only changes the radio station if a currently playing song is disliked by the user. Similarly, **Eubanks** will change the radio station to another station if a particular song that the user likes is playing on that other station. Clearly, **Eubanks** provides no mechanism for temporarily suspending sampling of a particular radio station for some period of time. In fact, once **Eubanks** changes the station, there is no guarantee that **Eubanks** will return to that station after any particular period of time since the channel changes provided by **Eubanks** are based entirely on whether a user likes or dislikes particular content being played on a station.

Therefore, in stark contrast to the position advanced by the Office Action, it should be clear that the **Eubanks** reference fails completely to disclose **"wherein simultaneously monitoring two or more media streams comprises automatically switching away from one of the media streams to another of the media streams media stream for a time period determined by a duration of any identified media object in the media stream being switched away from."**

Consequently, with respect to claim 23, as amended, no prima facie case of obviousness has been established in accordance with both the M.P.E.P. Section 706.02(j),

and in accordance with the holdings of *In Re Fine*. This lack of a prima facie showing of obviousness means that the rejected claims are patentable under 35 U.S.C. §103(a). Therefore, the Applicants respectfully request reconsideration of the rejection of claim 23, as amended, and thus of dependent claims 24-31, 37-43, 45, 46, and 48 under 35 U.S.C. §103(a) over the proposed ***Pitman-Ellis*** combination reference in view of the novel language of claim 23, as recited below:

A system for determining content of multiple media streams in real time, comprising:

- simultaneously monitoring two or more media streams in real time;
- sampling each media stream;
- deriving a signal fingerprint from each sample from each media stream;
- comparing each signal fingerprint to a fingerprint database, said fingerprint database including known fingerprints of known media objects and metadata information describing the known media objects;
- identifying one or more media objects by locating matching fingerprints of known media objects to each signal fingerprint;
- wherein simultaneously monitoring two or more media streams comprises automatically switching away from one of the media streams to another of the media streams media stream for a time period determined by a duration of any identified media object in the media stream being switched away from;***
- populating an object database residing on at least one local server computer with statistical information derived from each identified media object, and with any metadata associated with the matching fingerprint of any known media objects; and
- providing an interactive user interface for allowing at least one remote client computer to interact across a network with the object database residing on the at least one local server computer." (emphasis added)

2.3 Rejection of Claims 50-66:

The Office Action rejected claims 50-56, 58-61, and 63-65 under 35 U.S.C. §103(a) as being unpatentable over **Pitman** in view of **Ellis** and further in view of **Eubanks** based on the rationale that the proposed **Pitman-Ellis-Eubanks** combination reference discloses the Applicants claimed invention. In addition, dependent claims 57, 62 and 66 were rejected over the proposed **Pitman-Ellis-Eubanks** combination reference in view of several additional references. Applicants respectfully traverse these rejections.

In particular, as with claims 19 and 23, in rejecting independent claim 50, the Office Action again states that:

"Eubanks discloses monitoring at least one user selectable media broadcast signal common to a user selectable geographic region using at least one automatically tunable receiver, sampling each broadcast signal for any of predefined periods of time and for periods of time determined by media objects identified in the at least one broadcast signal (column 5 lines 21 -31, the system outputs audio content until it receives a signal from the user indicating a like or a dislike and column 4 lines 5-20, the system determines if the template created by the signal matches a stored set of templates. If it does, the system sends a control signal to the tuner, which tunes to a new frequency)."

However, as discussed above with respect to the rejection of claims 1 and 23, **Eubanks** only changes the radio station if a currently playing song is disliked by the user. Similarly, **Eubanks** will change the radio station to another station if a particular song that the user likes is playing on that other station. Clearly, **Eubanks** provides no mechanism for temporarily suspending sampling of a particular radio station for some period of time. In fact, once **Eubanks** changes the station, there is no guarantee that **Eubanks** will return to that station after any particular period of time since the channel changes provided by

Eubanks are based entirely on whether a user likes or dislikes particular content being played on a station.

Therefore, in stark contrast to the position advanced by the Office Action, it should be clear that the **Eubanks** reference fails completely to disclose **"sampling each broadcast signal for any of predefined periods of time and for periods of time determined by media objects identified in the at least one broadcast signal."**

Consequently, with respect to claim 50, no prima facie case of obviousness has been established in accordance with both the M.P.E.P. Section 706.02(j), and in accordance with the holdings of *In Re Fine*. This lack of a prima facie showing of obviousness means that the rejected claims are patentable under 35 U.S.C. §103(a). Therefore, the Applicants respectfully traverse the rejection of claim 50, and thus request reconsideration of the rejection of claims 50-66 under 35 U.S.C. §103(a) over the proposed **Pitman-Ellis-Eubanks** combination reference in view of the novel language of claim 50, as recited below:

"A method for providing an interactive user interface for querying a database of content information that characterizes at least one signal, comprising:

monitoring at least one user selectable media broadcast signal common to a user selectable geographic region using at least one automatically tunable receiver;

sampling each broadcast signal for any of predefined periods of time and for periods of time determined by media objects identified in the at least one broadcast signal;

deriving a media object trace fingerprint from each sample, using a separate instance of a fingerprint engine for each receiver for simultaneously processing each monitored broadcast signal in real-time;

comparing each media object trace fingerprint to a fingerprint database, said fingerprint database including known fingerprints of known

media objects, metadata information describing the known media objects, and fingerprints of unknown objects for identifying unknown but repeated objects;

identifying one or more media objects in one or more of the broadcast signals by comparing each media object trace fingerprint to the known fingerprints in the fingerprint database to locate matching fingerprints of known media objects;

populating an object database residing on at least one local server computer with statistical information derived from each identified media object, and with any metadata associated with the matching fingerprint of any known media objects; and

providing an interactive user interface for allowing at least one remote client computer to interact across a network with the object database residing on the at least one local server computer.” (emphasis added)

2.4 Rejection of Claims 9, 13, 19, 20, 21, 32, 33, 34, 35, 36, 44, 47, and 49:

The Office Action rejected dependent claims 9, 13, 19, 20, 21, 32, 33, 34, 35, 36, 44, 47, and 49 under 35 U.S.C. §103(a) based on the rationale that proposed *Pitman-Ellis* combination reference disclosed these claims in view of various combinations of other references including the cited *Eubanks*, *Olerund*, *Burges* and *IEEE* references.

However, since Applicants have shown that the respective parent claims (i.e., claims 1 and 23) of the rejected dependent claims are patentable over the cited references, it follows that the use of additional references (*Eubanks*, *Olerund*, *Burges* and *IEEE*) in attempt to reach various elements of the dependent claims is *not* sufficient to support a rejection of dependent claims under 35 U.S.C. §103(a) where the parent claims include allowable subject matter.

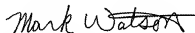
Consequently, in view of the allowability of claims 1 and 23, Applicants respectfully request reconsideration of the rejection of claims 9, 13, 19, 20, 21, 32, 33, 34, 35, 36, 44,

47, and 49 under 35 U.S.C. §103(a) in view of the allowability of their respective parent claims.

CONCLUSION

In view of the above, it is respectfully submitted that claims 1-6 and 8-66 are in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of claims 1-6 and 8-66, and to pass this application to issue. Additionally, in an effort to further the prosecution of the subject application, the Applicant kindly invites the Examiner to telephone the Applicant's attorney at (805) 278-8855 if the Examiner has any questions or concerns.

Respectfully submitted,



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